OPERATOR'S MANUAL
OM-E34940

JOHN DEERE
NO 2
BALE EJECTOR



Introduction

Your new John Deere No. 2 Bale Ejector is a dependable machine. With proper care and operation you can expect to receive the service and long life designed and built into it. Like any precision machine your ejector will require some attention at regular intervals. When any questions arise regarding lubrication or adjustments, use your manual as a guide to service your machine the RIGHT WAY.

If you find yourself in need of additional information or special servicing not covered in this manual, see your John Deere dealer. He is in a position to answer your questions for you.

When in need of parts either to replace wornparts or to make emergency repairs, see your John Deere dealer.

When ordering parts, give your dealer the serial number of your ejector. This information will help him give you prompt and efficient service.

The Serial No. of your machine is located on the left-hand side panel in the lower rear corner. Record it in the space provided in the picture below.



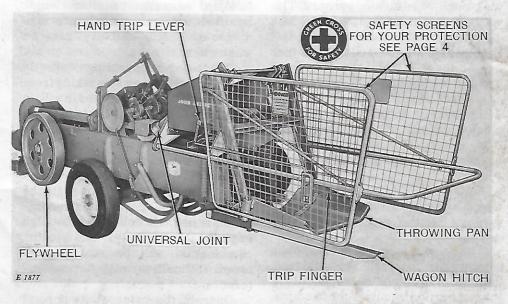
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Specifications

NOTE: Right- and left-hand sides referred to in this manual are determined from a position at the rear of the machine facing in the direction of travel.

(Specifications and design are subject to change without notice.)



John Deere No. 2 Bale Ejector on 24T Baler

General

The automatic bale ejector eliminates the job of manually loading the bales. Field baling and loading becomes a one-man operation, the same as chopping hay or picking corn.

The bale ejector bolts on the bale case at the rear of the baler and automatically throws the bales up and into the trailing wagon. The ejector does not interfere with the normal operation of the baler.

Wagon recommendations

The wagons used with the bale ejecting system are an important part of the operation.

The wagon tongue should measure a minimum of 55 inches from the wagon bed to the hitch point to allow clearance when turning corners. The wagons should have a bed of 7 feet x 12 feet (preferably larger), and be equipped with sides and tailgate that are at least 7 feet high. The front endgate can be from 3-1/2 feet to 4-1/2 feet high. A wagon of this size will provide a good ''target'' for the ejector and will allow a satisfactory load size. Manual stacking or arranging of bales in the wagon is not required.

CAUTION: Do not overload the wagon as bales falling off the wagon may strike the ejector and cause damage.

The wagon floor and sides should be sturdily constructed to withstand the impact of the bales, especially if your operation requires the handling of full size bales (up to 38 inches in length and up to 80 pounds in weight).

Additional labor savings can be achieved if you provide some means

for easy unloading such as a floor conveyor or a standard hydraulic hoist. It is recommended that the entire rear tailgate be made to open to prevent bales from bridging and wedging while unloading.

When the wagons are to be used for artificial drying of high-moisture hay, they should have solid sides approximately 5 feet high and slatted floors with approximately 30 per cent open area to allow for the movement of air through the bales.

Windrowing and baling -

Recommended windrowing and baling procedures are the same when operating with an ejector as when operating without it. The John Deere way of making hay should be followed wherever possible. Windrows should be of moderate size made by a side-delivery rake or windrower.

The baler is operating correctly and efficiently when it is taking from 12 to 18 charges per bale for a bale 36 inches in length. Bales with fewer charges will be poorly shaped and may have a large enough variation in length to cause erratic operation of the ejector, which can lead to excessive shear pin failures in the ejector. If proper operating recommendations are followed, the high capacity of the baler and ejector combination will be realized and fewer difficulties will be encountered.

Operate the baler at its normal operating speed of 65 strokes per minute under load to get the best results from the ejector.

NOTE: Increasing or decreasing speed slightly will help the operator to fill both the front and the rear of the wagon.

Ejecting bales

The number of bales that will miss the wagon (or roll off) depends on the location of the wagon, angle of the throwing pan, weight of bales, the number of sharp corners in the windrows, and the contour of the land.

With a little experience any operator can become skilled in the use of the ejector and very few bales will miss the wagon.

NOTE: The ejector may be more accurately aimed on corners, hill-sides, and contours by "pivoting" the ejector with a remote hydraulic cylinder or electric aiming control.

The bales will fall toward the back of the wagon when the baler is operated at its recommended speed. As the wagon is filled, the bales will pile up and tumble forward for even distribution.

The last bales ejected into the wagon should be dropped nearer the front of the wagon. Throttle down the engine or tractor very slightly to permit the bales to fall in the front part of the load.

Unloading and storing bales

Since it is not practical to unload these bales with a grapple fork or sling, an elevator should be used. There are hoppers available for the John Deere Portable Elevators into which the bales can be dropped from the wagon. Chopped hay or silage hooks (bent forks) can be used to pull down the bales when unloading.

For additional convenience, a John Deere Conveyor is available. This conveyor receives bales from the elevator and distributes them in the barn. It is not necessary to stack the bales.

Bale size metis

Your No. 2 Bale Ejector will handle bales from 22 to 38 inches in length and up to 80 pounds in weight. The protective shear pins will shear if longer or heavier bales are thrown, and repeated abuse may result in damage to the ejector. If you are throwing a majority of bales in excess of 50 pounds, consider the use of the stronger double-strand main drive chain. (See page 12#)

Bale density can be easily changed by regulating the tension adjusting screws with the ratchet wrench furnished with your ejector.

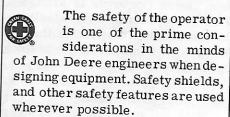
Bales with a high moisture content for artificial drying operations also may be handled with the ejector.

Transporting

When transporting the baler and ejector with a trailing wagon, lock the wagon hitch in its right-hand position to allow the wagon to trail directly behind the baler.

CAUTION: When transporting the ejector on a road or highway at night or during the day, use accessory lights and devices for adequate warning to the operators of other vehicles. In this regard, check local governmental regulations. Various safety lights and devices are available from your John Deere dealer.

Safety precautions

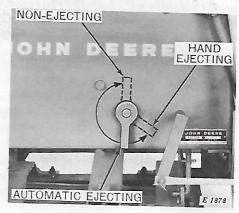


- Before servicing or adjusting the ejector, or removing bales or other material from it, or hitching wagon to baler, always:
 - (a) disengage all power,
 - (b) shut off engine, and then
 - (c) wait until baler flywheel has stopped rotating.
- 2. Never stand behind ejector while baler is operating.
- 3. Always have side safety screens in place while operating.



be careful......avoid accidents

Hand trip lever



Use the hand trip lever for "automatic ejecting," "non-ejecting," or "hand-ejecting."

When the lever is positioned at "automatic ejecting" the bale ejector works automatically.

Turn the lever clockwise to ''nonejecting'' to lock out the trip mechanism. Use this position if you desire to drop bales on the ground.

The ejector may be hand-tripped by turning the lever counterclockwise to the 'hand ejecting' position. Use this position to test the ejector.

NOTE: Do not attempt to automatically eject bales which have remained in the bale case while the baler was not in use. When starting to bale, turn the hand trip lever clockwise to ''non-ejecting' and run out the bales which were left in the bale case.

Bale length timing

The ejector trip mechanism must be timed with the baler measuring wheel before automatically ejecting bales. The ejector must trip when

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the completed bale has cleared the bale case by 3 to 5 inches or when the front end of the bale is flush with the front edge of the throwing pan (the edge of the pan closest to the bale case).

If the ejector trips too soon, bales will be pulled from the bale case and may roll end-over-end or they may be thrown straight-up.

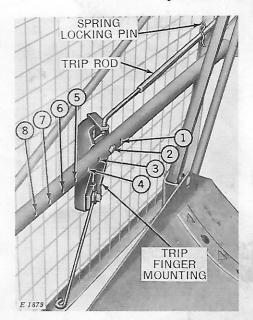
If the ejector trips too late, the rear of the bale may strike the guardrail and the throwing pan may hit the end of the next bale emerging from the bale case. Correctly time the ejector as follows:

- 1. Lock out the trip mechanism by turning the hand trip lever clockwise to the straight-up position.
- 2. Adjust the baler measuring arm to produce the desired bale length (between 22 and 38 inches) according to instructions in the baler operator's manual. Make at least four bales to determine actual bale length (measure bale length at the tied area on the bale). Return the hand trip lever to its normal operating position (straight down).



CAUTION: Before adjusting the machine:

- (a) disengage all power,
- (b) shut off engine, and then
- (c) wait until baler flywheel has stopped rotating.
- 3. Set the trip finger mounting on the guard pipe in the proper position for the length of bale being made. There are eight holes to match bale lengths as shown in the following chart. (The first hole is toward the front.)

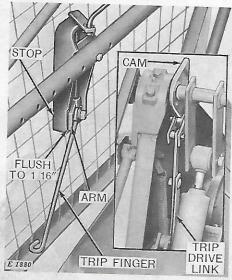


Hole No.	Bale Length (Average
1 or 2	22 in.
2 or 3	24 in.
3 or 4	26 in.
4 or 5	28 in.
5 or 6	30 in.
6 or 7	33 in.
7 or 8	36 in.
8	38 in.

Adjust the trip rod to its correct length to match the trip finger mounting by relocating the spring locking pin. If the trip finger mounting is located in hole No. 1 then the inside telescoping half of the trip rod must be set in hole No. 1, etc.

NOTE: Adjust the bale length settings as necessary to obtain the desired bale length. Different types of crops and bale density may cause the bale to be a different length than the average as shown above.

Trip drive link

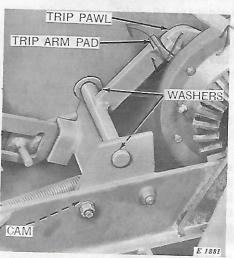


The trip drive link is correctly adjusted when the cam follower roller is on the high point of the cam and the trip finger mounting arm is flush to 1/16-inch away from the trip finger stop.

Adjust for proper trip finger arm clearance by lengthening or shortening the trip drive link. Tighten bolts securely to maintain this adjustment.

NOTE: The trip finger will project approximately 15 degrees forward from a right angle to the guard pipe when in the ''home'' position.

Trip arm adjustment



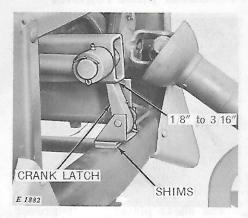
The clutch trip arm is properly adjusted when the front edge of the pad on the trip arm is flush to 1/16-inch off of the face of the trip pawl and when the right-hand edge of the pad is flush to 1/16-inch off of the face of the pawl.

Adjust for the proper contact on the front edge of the pad by loosening the rear right-hand trip arm mounting bolt and rotating the cam on the inside of the trip arm plate. Tighten the mounting bolt.

Adjust for the correct contact on the right-hand edge of the pad by shifting washers on either side of the trip arm.



Crank latch adjustment



The crank latch is properly adjusted when there is 1/8- to 3/16-inch play between the crank and the crank latch when the crank is in the 'home' position, and when the clutch trip arm has engaged the trip pawl.

Adjust the crank latch by adding or removing shims under the latch.

Pitman adjustment

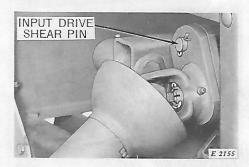


The pitman is correctly adjusted when it is centered between the throwing frame clips within 1/16-inch.

Adjust the pitman with washers to gain the correct alignment.

Shear pins

Input drive shear pin



This special shear pin helps protect the ejector from damage due to too much input torque. Replace the pin with the SPECIAL input drive shear pin only!

Pitman shear pin



The special shear pin in the pitman helps protect the throwing pan and frame from damage which may occur if the throwing pan should strike the end of a bale.

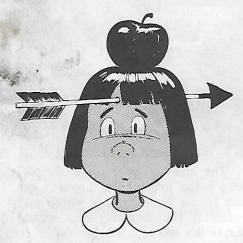
When replacing the special shear pin in the pitman, use the larger holes in the collar for easier removal of the sheared pin. Insert the new pin through the smaller holes in the collar and make sure the pitman spring is compressed 1/16- to 3/16-inch.

Adjust for correct spring compression by adding or removing washers between the front of the spring and the shear pin collar.

Shock absorbers



The shock absorbers cushion the throwing arms on the return stroke. Remove and check the shock absorbers after every 20,000 bales. Replace shock absorbers if there is no resistance to movement in compressing or extending the shock absorbers.



Accidents don't just happen
They are CAUSED!
NATIONAL SAFETY COUNCIL R 2250

Shear plate register



The shear plates are in proper register when the shear drive plate turns freely and has a maximum of .010-inch gap between the drive plate and the driven plate.

Adjust for proper register by loosening or tightening the castellated nut at the rear end of the hook-up. Adjust one castellation at a time until proper register is obtained.

Lubrication

The economical and efficient operation of any machine is dependent upon regular and proper lubrication.

Fittings

Clean grease fittings before using grease gun. Replace any lost fittings immediately.



CAUTION: Before adjusting, cleaning, or lubricating the machine:

- (a) disengage all power,
- (b) shut off engine, and then
- (c) wait until baler flywheel has stopped rotating.

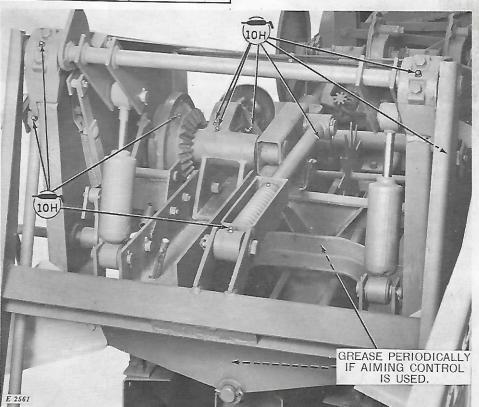
SYMBOLS

Grease every 10 hours of 10H operation with SAE multipurpose-type grease.

Grease every 100 hours of 100 Hoperation with SAE multipurpose-type grease.

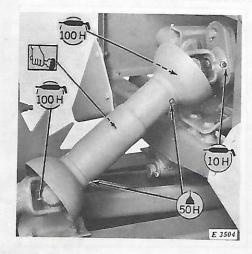
Oil every 50 hours of operation with SAE 30 engine oil.

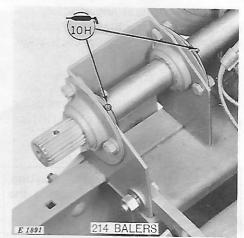
Brush periodically with SAE multipurpose-type grease.

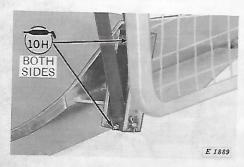


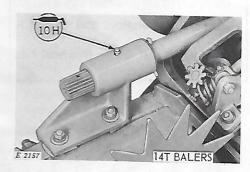
10 lubrication

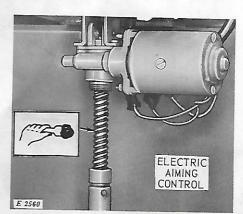
Lubrication—continued





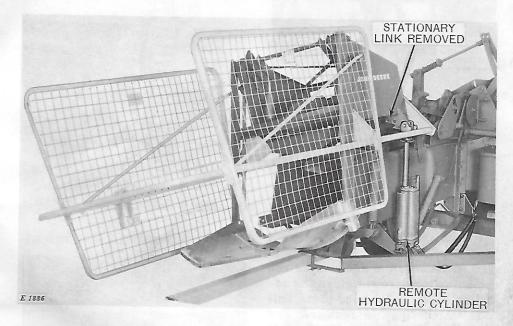






ATTACHMENTS

Hydraulic bale aiming control Electric bale aiming control



Ejector Tilted for Throwing Bales to the Left-Hand Side

When operating on hillsides or when turning corners bales can be aimed accurately at the wagon by tilting the ejector up to 15° to either side.

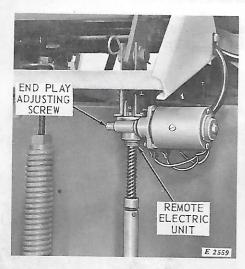
Maximum pivoting of the ejector will allow the bales to be thrown approximately 35° to the side of the baler. This will take care of most operating conditions including turns of 90°.

The bale ejector may be pivoted by using a remote hydraulic cylinder or a 12-volt electric aiming control. See the assembly section of this manual for installation of either of these attachments. NOTE: Additional hoses and supports are required depending on the model of the baler. (See page 13.) Refer to your tractor operator's manual for correct information regarding the hookup of the remote cylinder oil lines.

CAUTION: When using the bale aiming control on the ejector, remove the stationary link from the ejector frame and install the pivot stop which limits the pivoting of the ejector when the cylinder is removed for other uses. (See page 20.)

12 attachments

Servicing electric unit



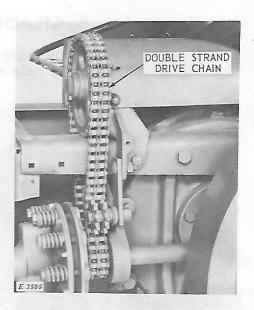
Check the gear unit on the pivot control periodically. If end play is noticed between the motor shaft and the adjusting screw, tighten the adjusting screw at the rear of the unit until all end play is removed. End play can be detected by a gradual tilting of the ejector.

CAUTION: The motor has a builtin thermo circuit breaker control to protect it from damage if the switch is held in either extreme position too long. The switch will work properly again after the motor cools.

Double-strand drive chain

Use the double-strand drive chain to strengthen the baler main drive when a majority of bales thrown with the ejector are in excess of 50 pounds.

The double-strand drive chain will work on 24 Balers serial no. 2426 and above; on 214 Balers serial no. 9577 and above; and on all 224 Balers.



Bale hold-down attachment



The bale hold-down attachment will be beneficial when operating in rough or hilly ground conditions or when baling straw or other ''slick'' crops.

Assembly

Shipping bundles

Bundle No. Description Bundle No. Description Code 1060 No. 2 Bale Ejector AE 14963 E Double-strand drive Throwing arm shield BE 10447 E chain for 214 Balers Serial No. supports and trip arm 9577 through 17754 BE 10448 E Throwing arm shields AE 14964 E Slip clutch hub for 214 BE 10449 E Throwing pan Balers with double-strand drive BE 10454 E Bale Ejector chain Serial No. 17755 and above BE 10169 E Hose support for en-Code 1061 gine balers with ejector hydraulic Ejector adapting parts for 14T Balers Serial No. 75925 aiming control and above BE 10437 E 24 Baler wagon hitch BE 10253 E L.H. axle extension support and brace BE 10453 E Adapting parts and BE 10450 E 24 Baler adapting hitch support parts BE 10452 E 214 Baler wagon hitch Code 1063 Ejector adapting parts support for 14T Balers Serial No. 58335 BE 10480 E 24 and 224 Baler hythrough 75924 draulic lines and supports for 6012 E L.H. axle extension aiming control BE 10453 E Adapting parts and BE 10481 E 214 Baler hydraulic hitch support supports for aiming control BE 10482 E 14T Baler hose Code 1047 Ejector adapting parts clamps for hydraulic aiming confor 214 Balers Adapting parts BE 10451 E BE 10537 E Electric aiming con-BE 10493 E L.H. axle extension trol BE 10452 E Wagon hitch support BE 10606 E Wagon Hitch Support AE 14912 E Double-strand drive for 224 Balers chain for all 224 Balers and 24 BE 10610 E Adapting parts for Balers Serial No. 2426 and above 224 Balers

Assemble the bale ejector as illustrated on the following pages. The illustrations show the parts to be assembled and attached in their proper order.

AE 14962 E Double-strand drive

17755 and above

chain for 214 Balers Serial No.

Some assembly instructions of optional equipment may not pertain to your machine.

After unpacking and placing all parts where they will be handy, follow all the instructions carefully. Practically all trouble with new machines is due to improper assembly and lack of lubrication.

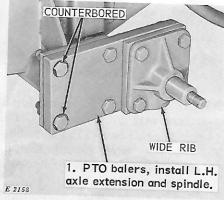
Bale Hold-Down at-

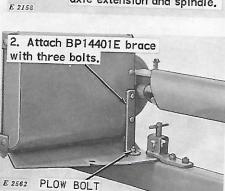
NOTE: Right- and left-hand sides referred to in this manual are determined from a position at the rear of the machine facing in the direction of travel.

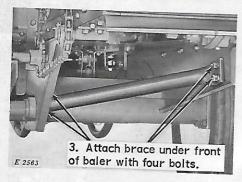
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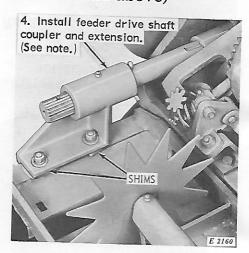
tachment

14T Balers (Serial No. 58335 and above)

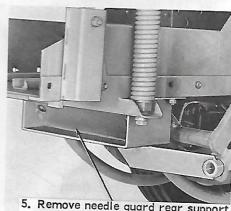




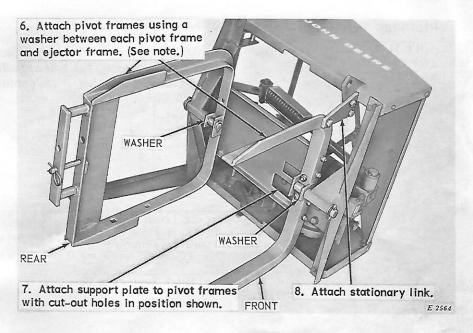




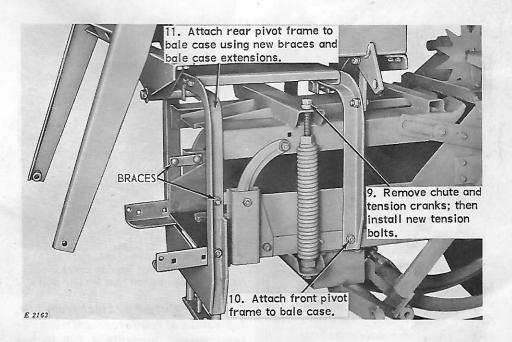
NOTE: Shim support to allow shaft to be easily inserted into coupler.



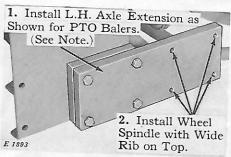
5. Remove needle guard rear support and install new hitch support.



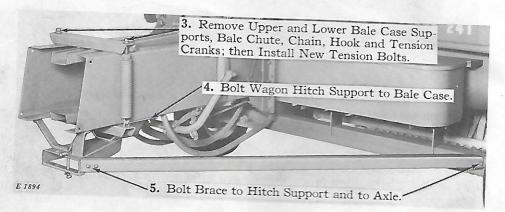
NOTE: All space between pivot frames and the ejector frame must be filled with washers when pivot frames are attached to bale case.



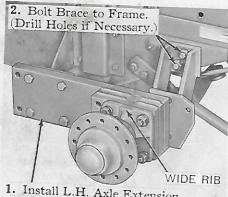
24 Balers



NOTE: On engine balers, do not use axle extension, but bolt spindle to the rear set of holes. Install spindle with wide rib to top.

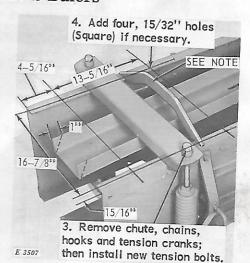


214T and 214WS Balers

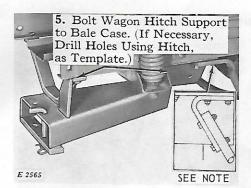


1. Install L.H. Axle Extension for PTO Balers. (See Note.)

NOTE: On balers with rectangular axles, attach extension to axle using front set of holes in extension. Attach spindle and brace to extension using rear holes in brace. On balers with round axles, attach as shown.



NOTE: Cut off 1/2 inch from L.H. top radius of reinforcement when reinforcement projects 4-1/8 inches above bale case. Trim 1 inch from each lip of extension channel.



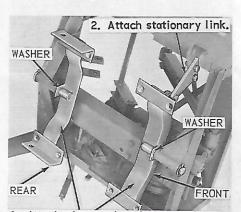
NOTE: On balers Serial No. 9576 and below, discard the original needle guard bracket and install a new bracket for each needle guard as shown.



NOTE: Shim support to allow shaft to be inserted easily into coupler. It may be necessary to install a long feeder drive shaft on some 214 Balers before installing the shaft coupler and extension. (214WS Balers Serial No. 9576 and below, and 214T Balers Serial No. 6100 and below use E11133E shaft. All 214WS Balers Serial No. 9577 through 14000 use E12904E shaft.)

Basic ejector assembly

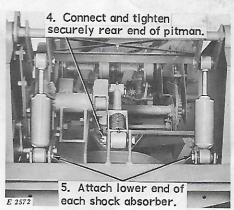
NOTE: 14T Balers disregard Steps 1 through 3.



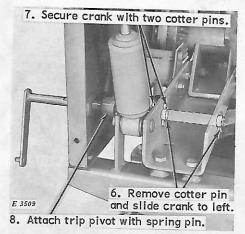
1. Attach ejector pivot frames using a washer between each pivot frame and ejector frame. (24 and 224 shown.)



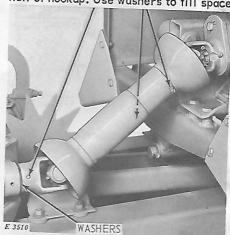
NOTE: All space between pivot frames and the ejector frame must be filled with washers.

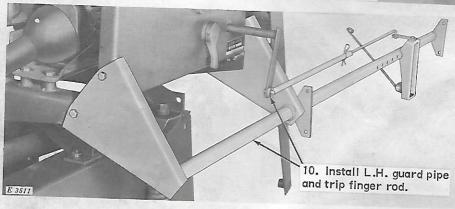


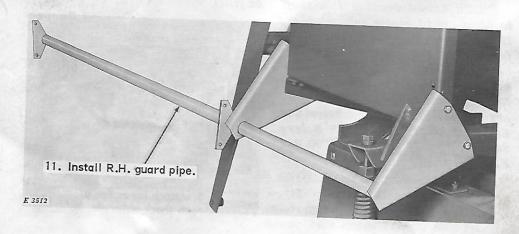
Basic ejector assembly-continued

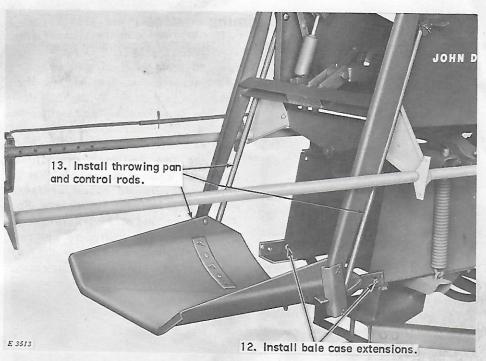


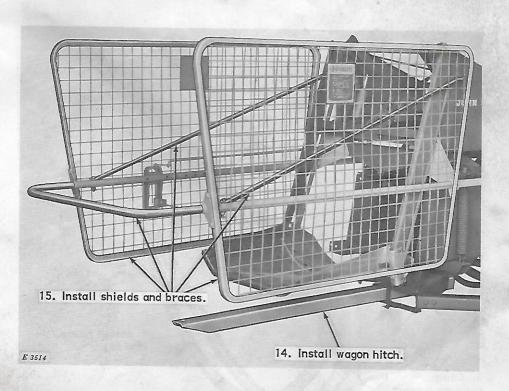
9. Attach rear shield to joint with nylon bearing. Grease shaft and install front half of hookup. Use washers to fill space.



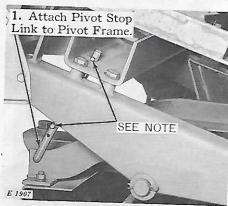






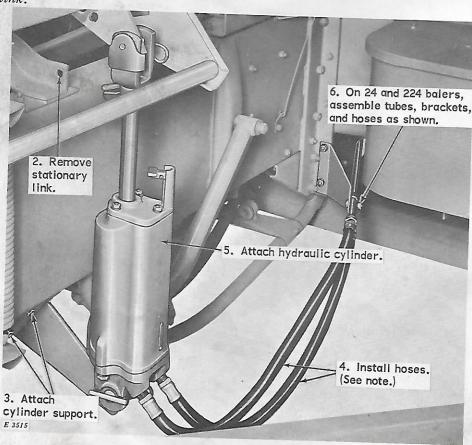


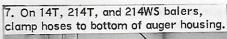
Hydraulic aiming control



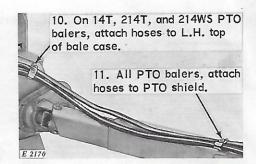
NOTE: For 14T Balers insert groove pins in next-to-top hole and bottom hole. For 24, 224, and 214 Balers, insert groove pins in top hole and in next-to-bottom hole of link.

NOTE: On 14T PTO Balers use two 140-inch hose extensions and on 14T Engine Balers use two 150-inch hose extensions. On 24 and 224 Balers use two 36-inch hose extensions. On 214 PTO Balers use two 146-inch hose extensions. On 214 Engine Balers use two 160-inch extensions. Use hose extensions in addition to standard hydraulic hoses furnished with remote hydraulic cylinders. For John Deere and other tractors with a high-pressure hydraulic system, 24 and 224 Balers must use the four adapters furnished. 214 Balers must use connectors with O-rings.



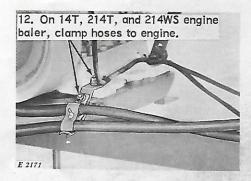


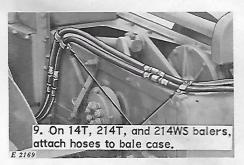


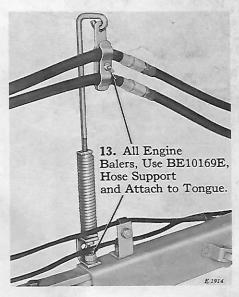


8. On 24 and 224 balers, attach tubes, brackets and standard hoses, as shown.

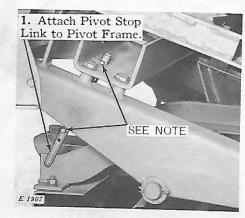






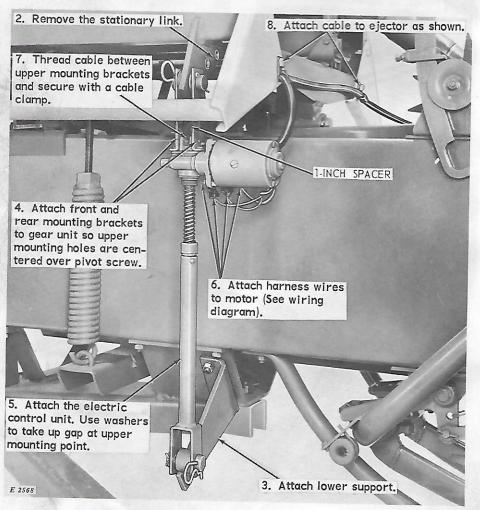


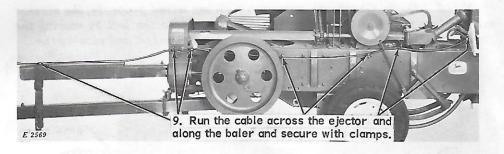
Electric aiming control

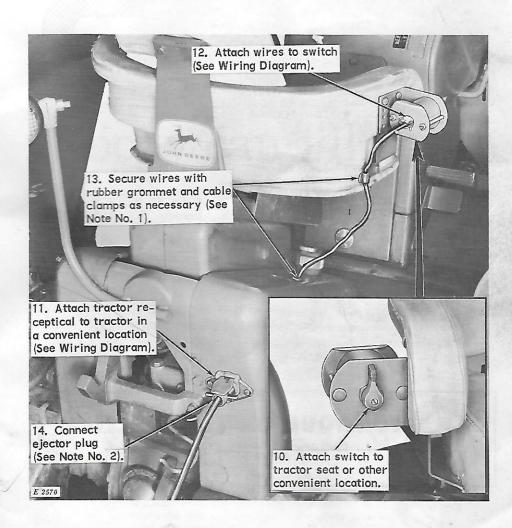


CAUTION: The electric pivot control will work with 12-volt systems only!

NOTE: For 14T Balers insert groove pins in next-to-top hole and bottom hole. For 24, 214, and 224 Balers, insert groove pins in top hole and in next-to-bottom hole of link.



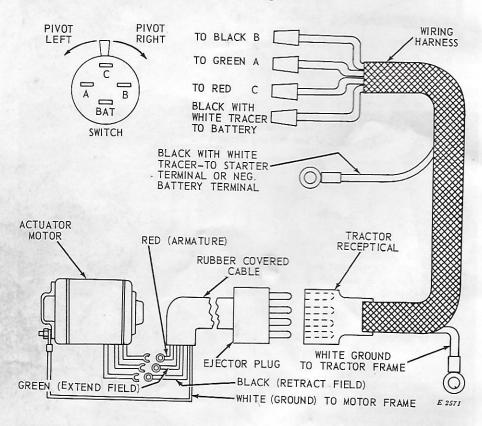




NOTE NO. 1. Thread the black with white tracerwire under the foot platform or other suitable place and connect to the starter solenoid or battery terminal on the starter. KEEP ALL WIRES CLEAR OF MOVING PARTS. NOTE NO. 2: Check all wiring connections with wiring diagram before operating electric pivot control.

When wired properly, the ejector will pivot to the left by moving the switch to the left and vice-versa.

Wiring diagram







nobody can fill them like you can!

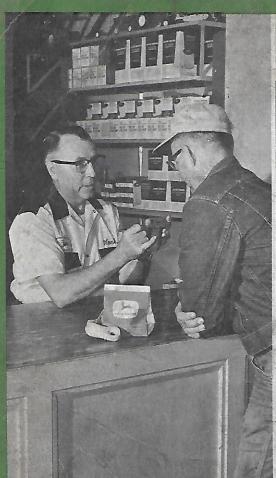
That's what the owner of this pair of work shoes is finding out—the hard way. Through a careless action, he has become the victim of an accident. It's a mighty tough way to find out that nobody else can wear your shoes or practice safety for you. And a needless, costly lesson to learn that safety is an everyday need.

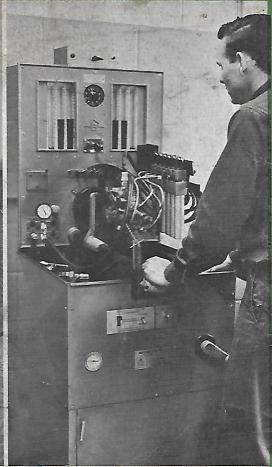
Put safety into each of your workdays; read the operator's manual thoroughly; know how to operate each machine properly and safely; take the safety precautions specified; think before you act.

Make sure you wear your "shoes" everyday. Outfit yourself with a safety program now.

As a member of the National Safety Council, we are privileged to use the Green Cross for Safety to designate not only our interest in Safety, but to emphasize and call attention to the safety precautions in this manual.







Dependable John Deere Parts and Service

A Bedrock Backing of Your Decision to Go with The Long Green Line

Behind every product in John Deere's Long Green Line stands a reliable John Deere dealer ready to serve you in time of need with dependable parts and service.

The seasons run early in his Parts Department—his well-stocked shelves of seasonal (and Genuine) John Deere Parts will help hold your downtime to a minimum. Service is another phase of his business that is vital to you. Working with modern equipment and guided by factory prepared service

manuals, his service specialists can pinpoint trouble with little delay and eliminate it without costly waste effort.

You can move through your entire year's operations comfortably assured that your John Deere dealer has anticipated your needs and stands ready to help solve your problems. Your competent dealer is one more assurance of the greater satisfaction and value you'll enjoy when you invest in The Long Green Line of John Deere Equipment.